THE

N.Z. HONEYBEE

A JOURNAL DEVOTED TO THE INTERESTS OF BEEKEEPERS

EDITOR-MANAGER . . . P. A. HILLARD

ISSUED on 20th of Each Month:
Subscription: 3/6, post free.

The Only Beekeeping Journal Published in New Zealand.

VOL. I., No. 10 MAY 20, 1938. PRICE 4d.

Meetings of Beekeepers

Compensation Wanted

(Reprint from "Waikato Times.")

The question of whether the Government was going to compensate exporters of honey who had lost assets in goodwill through the taking over of the industry by the Internal Marketing Department was raised at the annual meeting of the South Auckland branch of the National Beekeepers' Association in Hamilton on May 10. The matter was raised by Mr. T. H. Pearson, who suggested that exporters had built up valuable assets of goodwill by the establishing of recognised brands and the making of contacts with overseas buyers.

He added that if the exporters were to forego compensation for the assets they had lost, the Government was doing them an injustice. Goodwill had been built up at some considerable cost to the exporter, and he was entitled to payment for that asset.

The following remit was passed for consideration at the conference of the National Beekeepers' Association:—

"That the Internal Marketing Department should compensate exporters for the loss they would sustain in losing the goodwill they had built up over a number of years."

Unrestricted Selling

A second remit—"That the national conference should urge the Marketing Department to take immediate steps to meet the problem of unrestricted competitive selling against the Internal Marketing Department by individual producers and proprietary concerns"—was proposed by Mr. R. Clark and carried.

The election of officers resulted: President, Mr. W. Trounson; Vice-President, Mr. F. D. Holt; delegates to national conference, Messrs. T. H. Pearson and A. H. Davies; committee, Messrs. A. L. Pearson, A. E. Deadman, R. E. Hansen and T. Horner.

Manawatu Branch

There was an attendance of 15 members at the first meeting—after the summer recess—of the N.B.A., Manawatu branch, held at Massey College, on Monday, 11 April. Mr. F. J. Lewen, President, was in the chair.

Mr. H. L. Campbell, Milton, was elected secretary in place of Mr. J. D. Yorke, who had resigned owing to his having received an appointment at the Air Force.

Ordinary business was dealt with and it was decided that the next meeting be the annual one.

Mr. G. Rombach, who was to have spoken on the socialisation of the honey industry, sent his apologies for his unavoidable absence. It was decided that his address be held over until after the annual meeting.

Mr. H. P. Dodson (apairy Instructor) gave a short address on autumn management with special reference to the prevention and treatment of robbing. The speaker also outlined the programme for the winter, and on his suggestion, it was decided to deal at future meetings with written questions to be sent to the Apiary Instructor. By this means it was hoped that the real needs of beekeepers might be more adequately dealt with.

Mr. E. A. Field, Vice-President N.B.A., gave some interesting facts and figures in regard to the organisation of the honey industry expressing his confidence in the personnel of the late Honey Control Board, which recently resigned.

The meeting expressed satisfaction that the Internal Marketing Division had now taken control of the industry. Selected from lovely Autumn-reared

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The Kent (England) Beekeepers' Association has a membership of 1,009, owning 4,000 hives. The 1934 average crop was 30lbs. per colony, a total of 53 tons.

News of General Interest

Hawke's Bay Branch

The annual meeting of the Hawke's Bay Branch of the N.B.A., was held at Hastings on Monday, 9th May. The annual report disclosed that the H.B. branch had completed another successful year. After general matters had been discussed, remits were decided on for the forthcoming annual Dominion Conference of the National.

The following officers were elected for the coming year:— President, Mr. A. Lowe; Vice-President, Mr. N. Donkin; Hon. Secretary, Miss D. M. Dalgliesh; Hon. Auditor, Mr. W. H. Ashcroft; Committee, Messrs. W. H. Ashcroft, H. Shepherd, J. N. Walker, J. W. Laking, W. J. C. Ashcroft, L. Maultsaid and Mrs. Maultsaid. Miss D. M. Dalgliesh was elected delegate to the Conference.

A motion of sympathy was passed to all who had suffered through the recent floods.

Apiary Washed Away

Several beekeepers have suffered severely as a result of recent floods, and a letter from a producer on the Hauraki Plains (near Hamilton), describes the damage to his apiary following the breaking of the stop banks near his property:—

"The waters broke over the stop banks on Friday night a mile above here, and rushed in a torrent across my apiary. All the two-storey colonies were swept away to the boundary fence, the bees being drowned, and the hives and frames piled in heaps. The water is now two feet deep. The five and six-storey colonies stood the pressure best, although many of these were washed away. I had recently bought 84 new wire excluders and they are all gone. Before the flood I had 160 strong colonies; now I will be lucky if I find 50 alive. It is a bad enough job when hives only get blown over, but this is very much worse—a terrible mess. Only last week I bought a site to move half the colonies to; now they are lost."

N.Z. Honey Board

The personnel of the new Honey Board was recently announced, comprising Messrs. H. R. Penny (Okaiawa, Taranaki), L. F. Robins (Temuka), and W. Nelson (Otorohanga). The latter was appointed chairman.

Testing Honey

The scale giving the correct reading for testing honey for specific gravity has been requested by several readers, and is given below:—

Hydrometer.	Thermometer.	Specific Gravity.
84	60°F.	1.420
84	70°F.	1.425
84	80°F.	1.430
84	90°F.	1.435
82	60°F.	1.410
82	70°F.	1.415
82	80°F.	1.420
80	60°F.	1.400
80	70°F.	1.405
80	80°F.	1.410
80	90°F.	1.415

Hydrometer Used: Twaddles No. 4.

To read, multiply by .005 and add 1. Example:—84 × 5 = .420; plus 1 = 1.420.

To correct temperature, add 1 point to Hydrometer Reading for every 10% of heat over 60°F.

New Zealand Sunshine

The hours of sunshine in New Zealand for the year 1937 were:— Auckland, 2,147; Tauranga, 2,452; Hamilton, 2,166; Rotorua, 1,998; Palmerston North, 1,849; New Plymouth 2,210; Wellington, 2,079; Nelson, 2,406; Christchurch, 1,925; Timaru, 1,789; Dunedin, 1,647; Invercargill, 1,620.

A Quality Product

The Hon. W. Jardine, U.S.A. Minister to Egypt, in an address on November 18th at Cairo, stated that "the U.S.A. Department of Agriculture had succeeded in educating the farmer to a certain advanced point on purely agricultural matters. Now they were concentrating on teaching him how to market his goods, how to avoid the parasitical middlemen and learn to sell only good products. High quality was the best trade-mark possible and it was always possible to find a ready market for an article which was known to be of a consistently good quality."

———

"I wish to congratulate you on the standard of the "N.Z. Honeybee." It contains some valuable information for beginners."—W. H. Earnscleugh, Southland.

Twenty Thousand Trips

"Bees make many trips to get a pound of honey," stated Dr. E. F. Phillips. "Each bee weighs roughly one five-thousandth of a pound, and each collecting bee usually carries about half its own weight in nectar. Thus 10,000 trips are required to bring to the hive one pound of nectar. Nectar loses about half its weight during the process of ripening it to honey, so that one pound of honey represents the result of twenty thousand trips to the field."

Propolis is Antiseptic

Propolis, the glue-like gum gathered by bees and stuck on tops and ends of frames, has at last been found to have a commercial value. Propolis adheres to the fingers, and has to be removed with benzine. Propolis is now in demand as the base of an important antiseptic preparation used by surgeons. It is also recommended as a domestic remedy for wounds and burns.—"Gleanings."

Stages of Development

"One of the most prominent controversies of the years 1890-1900 was Gerstung's assertion, which no sensible person now doubts, that every bee passes through stages of development—that she is first a nurse, then a builder, then a guard and lastly a forager: that one cannot get a crop of honey with quite young bees; that older bees will no longer build, because their wax glands are exhausted and degenerated; that they are no longer able to feed larvae, because even before the time of building their brood-food glands have given out, and can no longer be developed to full working capacity; and that only very young bees can feed the queen and brood."—August Ludwig in The Bee World.

General News

E.F.B. (European Foul Brood) affects the bee-strength of the colony and, of course, its efficiency. It is due to an hereditary constitutional weakness, and can be cured by requeening the colony. The main difference betwen thse two diseases is that A.F.B. is like thin glue—it sticks to a match and strings out when the match is withdrawn from the cell. E.F.B. does not do this. (A special article on bee diseases will be published in a later issue of this Journal.)

Uniting Has Disadvantages.

A correspondent suggests that uniting a colony (with poor or vicious bees) to a colony with gentle, industrious bees is bad policy. The progeny of the goodly queen will be affected by the attention and food they receive; and as the new members of the colony will take on nurse duties, amongst other things, their bad nursing will influence the type of bee to be raised. Thus a good colony may easily be spoiled.

Our Advertisers

The support given to the "N.Z. Honeybee" by the firms that have forwarded advertisements, makes it possible for the journal to be published. The endeavour of the journal will be to give such high service to the industry that the welfare and prosperity of every beekeeper will be influenced permanently for the better. In order that we may continue our work for the good of our readers, we would ask for their unhesitating support of the goods supplied by our advertisers. When writing to an advertiser, our readers would render us a valuable service if they stated that they had seen the advertisement in the "N.Z. Honeybee."

Correct Your Address

The annual subscription to the "N.Z. Honeybee" is 3/6 in postal notes or money order. Cheques must have 6d added for exchange. Postage stamps are not acceptable.

Readers who are receiving copies of the "N.Z. Honeybee" incorrectly addressed or duplicated, would greatly oblige us by returning the wrapper of the journal with the correction made THEREON. If nothing else is written, the wrapper may be posted in an envelope, the flap of which may be turned inside, and with only a half-penny stamp for postage.

Address letters to :—

"N.Z. HONEYBEE,"
298 Remuera Road,
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If any person who receives the journal has retired from beekeeping and does not wish to receive the "N.Z. Honeybee," would he kindly write "refused" on the wrapper and put the journal in the post box. We will pay the postage at this end, and appreciate the trouble taken to advise us.

A Review of the Past Season

By T. S. Winter, Apiary Instructor.
(From the N.Z. Journal of Agriculture)

Early Sources of Nectar

The spring months of this honey season were the best experienced in the South Auckland district for many years. Calm, warm weather with a maximum of sunshine provided the necessary conditions for a season fully two weeks earlier than usual. Field pastures, hedges, native shrubs, and trees all flowered early and for a longer period than usual. A season such as this enables us to make comparisons with normal or bad years. The beekeeper, who depends almost entirely on seasonal conditions, should note carefully the reason for so much prosperity within the hives. Therefore, at this stage, the time is opportune to look back and study conditions that make beekeeping fairly easy.

Although the main honey crop in New Zealand is produced from white clover, there are many other sources of nectar-supply just as important. for without them the bees could not be brought up to full strength to take full advantage of the clover-flow and store a surplus of honey. Most of our native trees yield a great deal of nectar, and the time of flowering enables the bees to build up a great force of workers.

The yellow kowhai (**Sophora Tetraptera**) is one of the earliest spring flowering trees and lasts for a short period only, consequently the bees are unable to store a surplus from it. Where obtainable, however, it helps the bees greatly with early brood-rearing. The honey is a rich golden colour and has a pleasant flavour. Native fuchsia (**Genus fuchsia**) also blooms early in the season, and is worked freely by the bees at a time when all fresh nectar is absorbed in brood-rearing. There can be no mistake as to the source of the bees' food-supply when they are working this tree. By gently forcing their way into the nectar chambers of the flowers they become covered with a coating of deep-blue pollen, and present a pleasing picture on their return to the hives.

Another important early spring source in the South Auckland district is **Northopanax arboreum,** commonly called five-finger. The honey produced from this tree is very often confused with kamahi honey. The flavour is pungent and unpleasant, while the colour and body resembles kamahi. A surplus is very often produced from this source, especially in the King-country areas.

That rather unusual tree rewarewa (**Knightia excelsa**), found only in the North Island and Marlborough, also yields nectar in abundance early in the season. The buds appearing in November and December grow in clusters and resembles a bottle brush. When fully open, the flowers present a strange tangled appearance. Honey stored from this source is a dull-brown colour and has a slightly pungent rather unpleasant flavour. This tree is available to the bees some seasons when weather conditions are unsuitable for working other sources. In this district it is found chiefly along the East Coast district and hill country.

The Cabbage-Tree Flow

On the plains and lowlands the cabbage-tree (**Cordyline australis**) forms one of the most striking objects of New Zealand bush scenery. The flowers are white or cream coloured and give out a strong, sweet scent. This tree is found all over New Zealand, and flowers in November and early December. In some parts of this district, especially the Hauraki Plains area, strong winds are sometimes experienced about this time, with disastrous results to the beekeepers. The bees are attracted by the sweet nectar offering, but very few ever return to the hives—owing to the strong winds and the load of nectar carried, they are forced down, and perish.

Some seasons almost the entire force of field bees are lost in this way in a few days, and the hives become very weak at a critical period of the year. Usually, however, the cabbage-tree is a great help to the bees at a time when nectar is scarce from other sources. The honey produced has a heavy body, mild, sweet flavour, and is almost white in colour.

Perhaps the most important of our honey-producing trees is the rata family. Here in the North we have the downy rato (**Metrosideros tomentosa**), commonly called pohutukawa. Pohutukawa honey is water-white in colour, and granulates almost immediately it is extracted from the combs if the weather is at all cool. The flavour is distinctive. Owing to its natural colour, this honey is useful for blending purposes. This tree is found along coastal areas, and yields nectar freely, so much so that

a branch heavy in blossom will give a real shower-bath of nectar should it be shaken vigorously. The bees should be well forward and ready to store a surplus from this source when it is available about the end of December.

We have in this district, also, the North Island rata (**Metrosideros robusta**), a tree 50 ft. to 100 ft. in height. The flowers are smaller yet similar in construction to the pohutukawa and yield nectar freely.

Extracting Spring Honeys

These are a few of the chief sources of early nectar-supply apart from willows, barberry, buttercups, tea-tree, and heath. The straight willow provided a strong flow in September this season, and in some localities in the Waipa County this honey was extracted and placed on the market by October, a most unusual occurrence. The honey is very light in colour, granulates quickly, and has a slightly bitter flavour, but not unpleasant.

Barberry hedges through the whole district bloomed well and provided a steady flow of nectar in October. Honey from this source is very dark in colour, and has a strong caramel flavour. It is very valuable for feeding purposes right at the critical time of the year when the bees have to be kept going after the heath and willow finish blooming.

In some parts of this district this season it has been found necessary to extract all barberry honey above the brood-chambers to avoid getting it mixed with the finer grades associated with the main honey-flow. It is then stored away for feding purposes.

Buttercup grows freely in all low-lying, wet country, and blooms before the main clover-flow. So heavy is the yield of nectar when weather conditions are favourable that the bees store it in every available space, restricting the work of the queens, and holding up progress within the hive. The only remedy is to extract the combs early to make way for the main clover-flow. These conditions apply more to the Hauraki Plains area. This type of honey is a dull amber and has a poor flavour.

Heath, tea-tree, and flax all yield dark-coloured nectar, with a strong aromatic flavour. Heath begins to bloom in this district in August, but the main flow from it takes place in September. Some thousands of hives in the Waikato, Matamata, and Waipa Counties are moved out to the heath country every spring, where they store a good quantity of honey before being moved back to the clover pastures. In this way the bees do not need artificial feeding, and build up nicely in time for the main honey flow.

Tea-tree and flax areas are avoided as much as possible in this district, owing to the nature of the honey produced. Tea-tree yields in November and December, and flax towards the end of December. Honey from both these sources is medium amber in colour, heavy body, and strong aromatic flavour. It is valuable for feeding purposes, and I believe more attention will be paid to it in the future.

Weak Colonies for Flow

Many factors have to be taken into consideration when establishing an apiary, and perhaps the most important is locality. The reason why so many honey-producers large and small do not get a fair average from their colonies is the fact that their bees, for want of attention, do not build up early enough to take advantage of the main honey-flow. This is most noticeable where there is a scarcity of spring flowers, or during a late windy, wet, or changeable season right up to the main honey-flow. The bees that survive simply exist with a struggle until December and the main honey-flow commences.

Under these conditions the bees are not in fit condition to store a big surplus of honey. They are actually building up in numbers at a period when they should be storing a surplus, and in most cases cast late swarms. Under these conditions, also, in most localities a honey of low quality is obtained, simply because the bees were not strong enough numerically to deal with the nectar offering at the best period of the season. This state of affairs can be remedied by supplying just sufficient room for the expansion of the brood-nest, and steady stimulative feeding when necessary until the main flow commences.

Although the main crop of honey is gathered in this district in about five weeks, the bees should be prepared for it over a much longer period. It is the period of preparation that every beekeeper should study closely.

Cost of Drones

A German investigator has estimated that 1000 drones will consume a little more than four ounces of honey daily. The further estimate is made that drones reared in 28 square inches of comb will consume about nine pounds of honey in five weeks.
—American B.J.

Honey Processing Equipment

(Continued)

By J. RENTOUL

Cooling Plant Invented

With a satisfactory melter, it was possible to then consider what further was necessary to secure a satisfactory packing plant. Experience made it plain that what was necessary was that the honey should be melted at as low a temperature as possible, that after melting it should be cooled rapidly to a temperature low enough to allow starter to be added, the starter thoroughly mixed and the packed honey put in a cool chamber to granulate. The next problem then was to cool the honey after melting. With temperatures in summer running about 80° F. in the shade, 3,000 lbs. of honey in a tank will take some days to cool down to 80° and 90°. There are technical difficulties about cooling honey that are peculiar to itself. If you simply try to run the honey over a cold surface the viscidity increases until it will scarcely run at all, but will build up till the cold surface is insulated. There was no commercial cooler in use that was suited to the job.

The idea needed, seemed to me to be a reversal of the melting process, that as the honey travelled in a thin stream, it was to be subjected to a cool air current. The rate of flow from the melter at its maximum varied, but was as fast as 2 tins every six minutes, and over the whole melting period, averaged 2 tins every 12 minutes, 10 lbs. a minute. It was required to get the honey down to a temperature at least below 90° from a temperature of 120° to 125°, a reduction of 35°. I tried experiments of drawing air through a unit cooled by refrigeration. The refrigerating engineer estimated it would take two horse-power refrigerators, and cost £300 to install.

You have all noticed the cooling effect of a fan. Actually the fan does not cool the air. Turning the air over does not help. It is as hot one side as the other. As a matter of fact, if you put a thermometer in the current close to the fan the mercury will rise slightly owing to the heat generated by the impact of the air on the thermometer. It is the frequency of contact that does the cooling, and it was this idea that I brought into use. The resultant cooler is another box only some 3 feet 3 inches square, with a fan driving air through it. The honey runs from the melter through this box to the tanks. With an outside temperature of 78° in the evening, dropping to 74° in the morning, the honey in the tanks when mixed in the morning is round about 83° to 85°, whereas without the cooler it was 120° to 125°. I built the cooler mostly myself, and it cost only £25 for material. The cost to run it is the cost to run a quarter h.p. motor.

Honey Mixer Designed

The next unit in handling honey for packing is the tanks with mixers for stirring in a starter. This was not a difficulty as a type of mixer in general use was adopted.

To Mr. T. S. Winter is due the credit for developing into a commercially successful process the "starter process" for inducing granulation in honey. Whilst in charge of honey packing for the H.P.A., Mr. Winter had experimented until he had achieved success.

Fast Filler Invented

The next process is filling the honey into retail packages. For some years we have been using a hand filler that I had obtained in Europe. This filler was a big improvement on just running the honey out of a tap. With it a good man could fill 600 pots an hour and fill to exact weights. For a long time I have been looking for a power-driven filler that would handle honey satisfactorily. Back in 1927, we tried one out in the London Depot, but the expert with it could not get satisfactory results.

Recently the Department of Industries and Commerce went to considerable trouble to put various firms who manufacture fillers in communication with me. The information concerning the various fillers on the market was very useful in that it showed that our requirements were something different to anything that was available. The melting unit previously described will melt 600 tons a year, and four tanks are required. To move a filler from tank to tank and connect up did not seem the most efficient method of doing the job, and this would be necessary with the fillers offering. The fillers we had were efficient with hand power and an adaptation of this idea to a power driven filler seemed to me to be the thing.

The finished machine is a compact power-driven pump attached to the tank so that there is no delay in shifting and connecting up, and the tank can be moved anywhere. The pump's action is geared to a small feed table with holders that will take twelve containers of any kind up to 2 lb. capacity. The filling rate is 24 containers a minute, i.e. 1440 an hour. This, if desired, could be speeded up to 1,800 an hour. The comparative cost of the machine is small.

Two boys or two girls and a man can fill with this machine 1,440 packages an hour, as compared with two men filling 600 an hour with the hand machines. From the fillers the packaged honey goes to the cool chamber.

From this brief description, it will be seen that the plant to be operated by the Marketing Division will handle honey with no deleterious effect whatever on the honey. Providing the producer does his part in sending in the honey with all the excellence the bees have put into it, we will be able to pass it on to the consumer with that excellence unimpared. The plant will be as near "fool-proof" as it seems possible to get it. The tins as sent in are put into the melter. The honey runs away as soon as melted, passes through the cooler into the tanks, is mixed with the starter and packed and put into the cool chamber to set. It is all very simple with no stage in which the honey can suffer injury.

It is obvious, of course, that there will be considerable saving in costs as compared with methods previously used. Labour costs will be reduced one-half. Some of the other benefits are: quicker handling, bigger capacity, takes less room, and a much better pack. A complete packing unit is one melter, one cooler, four tanks and fillers, and one cool room. The unit at present installed would not be improved in efficiency by increasing its size. For bigger output the unit should be duplicated and by adding further units, there would be no difficulty at all in packing to any extent desired.

Granulation Temperatures

The idea prevails amongst some beekeepers that granulation is induced by temperature changes—cool nights and warm days. This is quite incorrect. At 140 degrees F. granulation is impossible; at 0 degrees it is also impossible. Somewhere between these two extremes is a temperature level that gives the maximum conditions favourable to granulation. This maximum level is at 57 degrees F. Honey of average quality which has had starter stirred into it, will granulate semi-firmly if held at this temperature in a freezing chamber for three days. Cold nights assist granulation by reducing the temperature of the honey nearer to 57 degrees; warm days retard granulation by removing the temperature away from that favourable level. Apart from temperature, an alteration of the balance of dextrose and levulose in honey will retard granulation, as also will an increase in water content.

Preventing New Infections

If a colony infected with American foul brood is destroyed and another colony later placed on the same site, it often contracts the disease. To prevent this, the soil in front of the diseased colony should be dug over or burned with benzine or kerosene, which will destroy all spores of disease.—Dr. E. J. Dyce.

Efficient Swarm Control

After the greater part of the active work of the season has been devoted to the production of brood, it is a most deplorable crime against efficiency to permit the crop of brood (i.e., bees) to be wasted and lost by means of swarming. Where the swarm is captured and its strength added again to that of the deserted parent colony, only a small loss is sustained, but where the swarm disappears the colony is of little value as a honey producer. It really amounts to this: A beekeeper who has produced the maximum amount of brood in his colonies and retains it there for the flow, secures 100 per cent. of the possible honey crop he could secure with his methods. But the beekeeper who loses swarms, loses the same percentage of his crop. A beekeeper who finds that ten per cent of his colonies have swarmed away, is only 90 per cent efficient. He has to carry 10 per cent more colonies than he need do in order to secure his desired crop. This increases enormously his costs of production of honey, and reduces the value of **HIS** share of the crop. The share of the crop used for wages, tins, cases, etc., is settled by fixed prices for these goods and services. **The Beekeeper's share is settled by his own efficiency.**

The prevention of swarming is one of the most important of all operations in the apiary, and will require a special article

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Internal Marketing Division
HONEY SECTION

P.O. Box 1293 Stanley Street,
'Phone 32-738 Auckland, C.1.
10th Feb., 1938.

GRADING DATES

The following are the dates arranged by the Department of Agriculture for Grading.

Please arrange for your Honey to arrive at the Grade Store three days before the commencing date.

	Mar.	Apr.	May	Jne.	Jly.
Auckland	1-4	4-8	2-6	6-10	28-29
New Ply.	7-8	11-12	9-10	—	4-5
Well'ton	11-11	14-15	12-13	—	7-8
Lyt'lton	14-15	18-19	16-17	—	12-13
Greym'th	17-18	20-22	19-20	—	15-16
Smithf'd	22-23	25-26	23-24	—	18-19
Dunedin	25-28	27-28	26-27	—	21-22
Bluff	30-31	29-30	30-31	—	25-26

THE BEE KINGDOM LEAGUE
has the pleasure of announcing that, in addition to the publication of the "Bee Kingdom" (Specimen Copy free on application) and its practical and scientific monographs, it has lately issued an important manual on
EUROPEAN BEE PLANTS
(By the Rev. M. Yate Allen, M.A.)
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To Our Readers

There are many of our readers who are desirous of becoming subscribers to the N.Z. Honeybee, but who have been too busy during the season to give attention to the matter. Perhaps time will be found, now that the pressure of work is easing up, to secure a postal note for the subscription and send it along. Many beekeepers throughout New Zealand have not yet seen a copy of this Journal, and next month we shall cease sending free copies to 1,000 of our readers and forward these copies to new readers who have not yet received the

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230 COLONIES BEES, in 6 yards. Situated 30,000 acres river flats (no ti-tree). Scope for expansion. No opposition. 10 acres land, good house, electricity; Consolidated School, High School. Total Price, £2600; £1200 cash.—Write R.P., c/o "N.Z. Honeybee."

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